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Sensible, Prudent & Shrewd: Building Blocks for a Theology of Efficiency

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**SENSIBLE, PRUDENT & SHREWD:
BUILDING BLOCKS FOR A THEOLOGY OF EFFICIENCY**

Paper Presentation

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Objectives

The objective of this paper is to examine the concept of efficiency (productivity) from a biblical and theological point of view. Some Christian writers support the concept of efficiency, others criticize it. With one known exception this topic is not formally considered by systematic or biblical theologians. Christian business scholars mention efficiency; however, to date none has offered a thorough examination of the concept from a biblical perspective. Scholars who have addressed the topic of productivity from a secular point of view have not done so through the lens of Scripture. This paper is limited in scope. This is not a paper on the theology of work. Also outside the scope of this paper is the study of wealth and poverty two subjects which have captured the attention of many Christian authors. These works have little to say about efficiency. Finally, this paper does not attempt to relate the issues of operational efficiency to the broad themes in contemporary management and leadership thought. The author assumes that the reader can find general works on these topics from which to gain an overview of the field.

Abstract

This paper examines operational efficiency from a biblical theology perspective. The paper describes operational efficiency in contemporary terms and considers six categories of constraints on efficiency. In pursuing its purpose the paper reviews six relevant biblical themes including: God's character, creation, covenant, shalom, blessing, and fruitfulness. Five biblical values and virtues describe how efficiency is to be achieved: truth, wisdom, prudence, usefulness, and stewardship. The biblical theme of agricultural yield provides an illustration of the instrumental virtues and values by which workers achieve and measure efficiency.

Key Words

Agricultural yield, assumptions, barrenness, Bible, biblical theology, blessing, contentment, covenant, creation, dynamic, efficiency, efficiency measures, fruitfulness, harvest, *Imitatio dei*, productivity, prudence, Sabbath, shalom, shrewdness, static, stewardship, technology, theology, truth, usefulness, utility, wisdom.

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ABSTRACT

This paper examines operational efficiency from a biblical theology perspective. The paper describes operational efficiency in contemporary terms and considers six categories of constraints on efficiency. In pursuing its purpose the paper reviews six relevant biblical themes including: God's character, creation, covenant, shalom, blessing, and fruitfulness. Five biblical values and virtues describe how efficiency is to be achieved: truth, wisdom, prudence, usefulness, and stewardship. The biblical theme of agricultural yield provides an illustration of the instrumental virtues and values by which workers achieve and measure efficiency.

INTRODUCTION

Being responsible for operational efficiency has become a central element in the definition of what it means to be a manager (Robbins & Coulter, 2009; Daft, 2008). The drive for higher productivity and avoiding waste are normal preoccupations of all human work regardless of one's religious beliefs (McKee, 1993). Efficiency is one of the widely-accepted legacies of the Scientific Management movement of the late 19th and early 20th centuries (Freeman, 1996; Bedeian & Wren, 2001; Taylor, 1911). Some claim that efficiency has contributed to raising the standard of living (Richards, 2002, p. 44; Drucker, 1954, p. 41). Others suggest that it is efficiency which, because of its influence on generating cash flow from operations, has been the primary source of wealth creation during the last 100 years. It has been improvements in productivity which has made possible the growth of capital for investment in new business ventures (Griffiths, 1984, p. 23-24). From another perspective efficiency has become the backbone of managerial ability to live up to the trust that business owners, employees, and customers (in the for-profit sector) and constituents (in the nonprofit sector) place in managers who are serving as their agents.

Efficiency has been the focus of study in all three sectors of the economy, at the level of the individual employee up to the level of the national economy, in a wide variety of industries, domestic and international firms, various business functions, and in companies that offer services as well as products. For just a few widely-diverging examples, consider that efficiency has been the focus of study of Taiwanese hospitals, European railway systems, American railroads, US air travel, Internet advertising, accounting services, automobile assembly plants in Turkey, hotels in Portugal, higher education, construction industry in China, gambling, banking services in India, electricity distribution in Poland, government agencies, oil and gas drilling, farm productivity in rural Bangladesh, timber harvesting, professional football (soccer) teams in the English Premier League, manufacturing firms in sub-Saharan Africa, grocery retailing in France, and the stock market.

It is not only managers who are interested in efficiency. Consumers are interested in efficiency, too. Waiting for an hour or two in a crowded airplane on the tarmac before or after takeoff because there is no place to put the plane if it finishes its journey on time raises consumer frustration over inefficient airlines. Waiting at the grocery store checkout line can evoke a

similar emotional reaction for some impatient customers. Wanting to pay the best price for the best fruits and vegetables at the grocery store is an expression of the desire for efficiency all along the chain of value from farmer's field to grocery store.

But not everyone is enamored with the concept. Stapleford (2002) represents many who believe that economic efficiency does not ensure social justice. Like any other cultural experience productivity can lead to idolatry (Sider, 2005, p. 102). Some Christians believe that economics has become essentially a religion. In their minds the "gospel of efficiency" has replaced the gospel of Christ (Nelson, 2005, p. 92-94; 2001). Rempel (2003) argues bluntly that "we have come to worship abundance." (p. 51) In her intellectual history of the concept Jennifer Alexander says that critics of industrial society are concerned that efficiency is a method of control and exploitation which is antithetical to the notion of God-created human freedom (Alexander, 2008, p. 1). Rooted in what is known as the shareholder view of the firm, efficiency can be contrary to the interests of some stakeholders who are not stockholders (Clark, 2002; Koslowski, 2002). For example, the economic orientation toward efficiency, some assert, leads managers to neglect other elements of the employer-employee relationship which may be contrary to the goals of efficiency (Tiemstra *et al.*, 1990, p. 189).

Another reason the topic of efficiency is important is that it has come to be a topic in the debate over the morality of capitalism (Novak, 1982; Sproul, 2008). General material welfare and prosperity in a capitalist society comes primarily because of efficient production of goods and services making these affordable and accessible to many people. But efficient production requires the use of capital-intensive tools and equipment which can be purchased only with surplus capital. Surplus capital results from achieving a profit.

With the focus on for-profit settings in which efficiency is highly regarded we can forget that in nonprofit organizations productivity is important, too. Some nonprofits may not operate with the same intensity of interest regarding efficiency as do for-profit firms, but a minimum level of efficiency must be maintained even in nonprofits if we assume that available funds are not unlimited. Without this the nonprofit would eventually cease its ability to achieve its mission.

This leaves a question which deserves more thorough study: When looking through the lens of Scripture, what do we find with respect to the managerial drive to achieve efficiency in work processes? The work of scholars such as Oslington (2000) suggests that exploring "theological economics" is a valuable pursuit in society where explicit discussions of theology have fallen out of favor from economic dialog and economics "has been largely ignored by theologians." (p. 32) Compared with the discussions regarding Christian theology over the centuries, systematic and biblical theologians have not paid much attention to the interests of business and economics. For example, with one exception (Grudem, 2003) a topic as narrow as the one envisioned for this paper is not formally considered among systematic or biblical theologians. Some Christian business scholars have mentioned efficiency; however, to date none has offered a thorough examination of the concept from a biblical and theological perspective.

It is the thesis of this paper that the Bible encourages the pursuit of operational efficiency within the constraints of moral principles. **The purpose of this paper** is to offer an examination of the concept of efficiency from a biblical and theological point of view. This is not a paper on the theology of work *per se*. Several books have been written on this topic (E.g., Jensen, 2006; Hardy, 1990; Volf, 1991; Larive, 2004). Also outside the scope of this paper is the study of wealth and poverty two subjects which have captured the attention of many Christian authors (E.g., Schneider, 2002; Sider, 2005; Griffiths, 1984). These and other authors also have little to say about productivity.

The paper will first present assumptions that are in play when considering the topic. It will present a brief introduction to the concept of operational efficiency as typically used in contemporary business. The paper will introduce the idea of constraints on efficiency. The paper will then review biblical themes and concepts relevant to Christian thinking about the topic including the following: God's character and attributes, creation, covenant, shalom, blessing, and fruitfulness. The paper will explore five values and virtues relevant to achieving efficiency: truth, wisdom, prudence, usefulness, and stewardship. The paper reviews the topic of agricultural yield as presented in the Bible as an illustration of achieving and measuring efficiency. *Imitatio dei* and our responsibility toward unproductive persons also is reviewed. This paper argues that these are the relevant building blocks for constructing a theology of efficiency. The paper offers a summary and conclusion as well as opportunities for further study.

ASSUMPTIONS

Several assumptions are at the foundation of this paper including the following:

- All activities of life are “aspects of a single devotional and doxological strategy.” (Packer, 1990, p. 20) There is no sphere of service to God which is “unspiritual” (Packer, 1990, p. 21). This means that a subject as “secular” as production efficiency at work is within the realm of spiritual concerns.
- The for-profit business sector is just as valid a sphere of service that brings glory to God as is the nonprofit sector.
- Microeconomic thinking is at the basis of much managerial action. Managers in the for-profit sector attempt to maximize economic profit (Pindyck & Rubinfeld, 2001; Drucker, 1954).
- The concept of efficiency is at the root of managerial decisions regarding allocating resources that are intended to achieve a profit (Putterman, 1990).
- The assumptions theologians bring to economic issues are different from those of economists (Jensen, 2006; Harper & Gregg, 2008; Meeks, 1989). Theologians begin with an assumption of abundance. Economics begins with an assumption of scarcity or limited availability of desired goods and services (Pindyck & Rubinfeld, 2001). Economic choices of how to allocate resources require making tradeoffs.
- The Bible, being the inspired word of God, is the authoritative rule of faith and practice for Christians as they live their life in this world. The Bible is the collective understanding of faithful servants of God. It contains the cumulative awareness about God and God's will for our lives.
- While the Bible has much to say to managers and leaders, it is not a comprehensive, unambiguous management or economic handbook (Richards, 2002, p. 6). Its primary purpose is theological in nature. On some specific managerial issues the Bible provides clear and direct guidance. On the core issues, it has a lot to say. On other issues it is silent or ambiguous though the broad theological themes that run through Scripture still remain as an authoritative general guide for discerning appropriate and inappropriate managerial practices.
- Like any occupation business can become a vanity chasing after wind (Ecclesiastes 4:4). Like people in any other occupation, including religious vocations, those in business can abuse their power, take advantage of others, and in other ways engage in immoral practices. God's judgment on all work applies equally to business occupations as it does to all other occupations (Ezekiel 34; Proverbs 11:1; Hosea 12).

- The talents and spiritual gifts needed to be successful in economic activities come from God just as surely as the talents and gifts needed to be effective in public evangelism, scientific research, fine craftsmanship, music performance, visual arts, organizational leadership, or medical ministry (Genesis 39:3, 23; Deuteronomy 8:17-18; 30:5; Isaiah 48:17).
- Humans are capable of both selfish and altruistic behaviors. They have a God-created desire to experience a sense of purpose in their lives.
- Humans also have the God-given ability to think beyond the present. They use this ability to order their lives in such a way to have a positive influence on a future which cannot be completely controlled. Indeed, the whole idea of morality of behavior would fall apart if the future impact of action is not considered (Griffiths, 1984, p. 20; See also Genesis 1:28-30; 3:15; Exodus 20:5; 34:7; Numbers 14:18; Deuteronomy 5:9; 28; Matthew 28:16-20; Luke 12:16-21; 14:28-30).
- Efficiency is not naturally present in organizations. Giving task assignments does not automatically create productivity. Productivity must be managed. One or more persons in the work environment must take a leadership role (whether formal or informal) to encourage cooperative action that leads to productivity.
- A variety of constraints make achieving efficiency difficult.

OPERATIONAL EFFICIENCY

Efficiency, also known as productivity, is an economic concept that considers the relationship between the value of desired ends and the value of useful means (Heyne, 1993; Foldvary, 1998; Neal & Hesketh, 2001; Drucker, 1974). The most commonly used, though not perfect, indicator of value is a monetary measure.

Dynamic efficiency is the management technology concerned with the relationship between output (O) and input (I). This is often expressed in the form of a ratio ($O \div I$). This is the concern with the prospects of producing “as large as possible an output from a given set of inputs” (Farrell, 1957, p. 254; See also Drucker, 1954, p. 41) or the ability to minimize inputs used for a given level of production (Yang & Chen, 2009; Heyne, 1993). This is sometimes referred to as *technical* or *operational efficiency*. Dynamic efficiency stems from the desire to create growth overcoming the natural limitations of resources by transforming resources into useful outputs thereby making *gains* in value. In contrast, **static** efficiency is the management systems concerned with conservation, avoiding waste, creating reliability when it is lacking, and reducing or eliminating costly variation when it is present. Static efficiency comes from concerns about managing the risks of resource loss (Alexander, 2008, p. 52). These two types of efficiency are interdependent. Creating reliability and reducing variation save resources and create opportunities for growth. And, by nature transforming inputs into outputs contributes to the wise use of resources. See Table 1.

[Insert **Table 1**. here.]

The most obvious measure of a company’s efficient use of inputs is its costs (Farrell, 1957). Costs for one firm may be different than for other firms because of differences in the relative strength of bargaining power with suppliers, differences in their economies of scale in production, the degree to which firms are labor-intensive verses capital-intensive, or differences

in the cumulated learning regarding production, supply-chain management, and marketing. With respect to agricultural products many of which are commodities in the current environment of industrialized countries, “it is never possible to decide precisely how far the fertility of a particular farmer’s land is due to nature and how far to good husbandry, how far the laziness and intractability of a particular firm’s labour force is ingrained and how far the product of bad management.” (Farrell, 1957, p. 260) Where the basis of competition is differentiation rather than price the cost structures of competitors will vary. Even here the need for efficiency is still present since for most products and services the degree to which customers are willing to pay higher prices is limited.

The economic logic of productivity can be seen in relation to a business owner’s use of assets. As owners anticipate the future they place assets (cash, inventory, property, buildings, and equipment) into the service of an organization’s mission within the larger context of service to society, the products or services which society demands, and the availability of substitutes. Owners and, through the delegation of authority their managers, naturally want to know to what degree the assets are achieving their intended purpose and how efficiently such achievement is being accomplished to generate cash flow from operations. If an asset is unproductive or less productive than is desired in terms of cash flow, all things being equal, the owner of the asset takes responsibility to make a change either in how the asset is being used or by employing a different asset altogether. The owner will make this judgment based on one or more tangible measures that are tracked over time. How the asset is used will involve production processes designed for improved economies of scale, economies of scope, and efficiency gained from the effects of cumulative learning (Besanko *et al.*, 2007; Pindyck & Rubinfeld, 2001). Typical measures of efficiency are shown in Table 2 Examples of Efficiency Measures.

[Insert **Table 2.** here.]

CONSTRAINTS ON EFFICIENCY

As promising as efficiency seems to us, it is not always easy to achieve. If it wasn’t for loyal managers committed to improving work processes so that costs and variation are reduced, most of the products we enjoy would be too expensive for most people to purchase and use effectively. Perhaps this is one reason why managers focus much of their energy on this topic at the workplace. At least six types of constraints affect efficiency: Natural, process, structural, behavioral, legal, and moral.

Natural. The natural limitations of raw materials and the presence of unfavorable contingencies work continually against efficiency. Humans work against the natural conditions such as gravity, temperature, pressure, wind, rain, ice, molecular bonds, friction, size and other factors. Humans also must create useful products in the presence of toxins, impurities, mold, pests, bacteria, viruses, and other things harmful to humans. Certain raw materials decay rapidly, break easily, or leak out when not properly contained or handled. These and thousands of other factors make achieving efficiency difficult.

Process. One reason perhaps that managers tend to work hard at improving efficiency is that when left unmanaged organizational systems and work processes tend toward chaos (entropy). All work processes have built-in constraints on productive capacity because of the type of technology used. Both machines and human beings have limitations on the maximum

throughput capacity. Because of this when inadequately managed many work processes develop bottlenecks which make advances in productivity difficult to achieve. (Goldratt & Cox, 1992; Hsu & Sun, 2005)

Structural. Organizational structural choices also have an impact on efficiency. Some organizational choices improve efficiency while others make efficiency more difficult to maintain. As organizations increase in size efficiency can be more difficult to achieve. Centralized decision making in small organizations can be more efficient than decentralized decision making authority. But as organizations grow efficiency can be maintained as the organization transitions toward a more decentralized decision making authority.

Behavioral. Making complex products and services that the world uses to make life comfortable, and in some cases livable, require workers to make adjustments to their mental, physical and social interactions with the world at work. Adaptation requires learning, new habit formation, putting aside self-interests for the sake of others, and maintaining a focus on the parameters that materials, machines, and fellow workers bring to the work processes. Many work processes stretch persons beyond their normal “comfort zone” of thinking and action. All of these human constraints tend to work against efficiency. If given a chance, many persons would prefer to work just a little slower with a little less intensity. After working at a high level of intensity, fatigue begins to compete with efficient work. Some persons are content to delay taking actions on difficult tasks in favor of working on easier tasks. This means that the efficiency of some work processes will suffer as a result. It is the role of managers to collaborate with other managers in order to maintain efficient work processes that compete with each other for time and resources.

Accomplishing a task in an efficient manner may add to a person’s well-being and sense of belonging in an organization. We might even argue that working efficiently contributes to a sense of purpose and meaning in life. Carried to an extreme, however, the push toward efficiency may actually undermine the sense of purpose in life where work becomes toil, and meaning in life has been sucked down the drain of performance graphs and the never-ending push for marginal improvements. The result is that humans may push back against this sense of meaninglessness by trading off a measure of efficiency in order to preserve their well-being. In some ways the experience of contentment also may work against achieving marginal increases in efficiency.

Legal. For all the reasons that laws and regulations are established in society such as in reaction to abuses against workers or the collective efforts of political groups, society imposes legal constraints on managers which make achieving efficiency more difficult. For all the good that laws and regulations do to protect workers, consumers and the environment, they also make the job of efficient production more challenging. Laws and regulations are notorious for raising the costs of doing business. These constraints require managers and workers alike to use their creative abilities to abide by the laws and at the same time find efficient means to make and deliver products.

Moral. There are also moral constraints that managers use when making decisions regarding how much work to expect of workers, how much to pay workers for their production, and how to treat workers in the process. Unfortunately there is no religious teaching that answers the question: At what point does the drive for efficiency in a particular work process involving particular workers violate biblical faith? The Christian manager must use judgment that is informed by biblical teaching, economics, and knowledge of human nature to fulfill the stewardship responsibility to the organization for organizational success and, at the same time,

fulfill a God-given stewardship responsibility for moral and spiritual success. This is not always easy. It may feel at times, as J. I. Packer has put it, “like hacking a path through the jungle.” (1990, p. 23)

Unfettered, the push for efficiency and wealth offers nothing substantial regarding how managers should act to obtain these goals (Boatright, 1988). Stripped of moral boundaries, almost anything might be allowed as long as that behavior does not violate the law or the managers don’t get caught. Striving for efficiency at the expense of values such as integrity, respect, and dignity for humans is dangerous because unchecked it will inevitably destroy morale, cohesiveness, and organizational effectiveness. Organizations can put the drive toward efficiency before moral standards and the needs of people, namely workers, customers, suppliers, and the general public (Crainer, 2000). This ripens the business situation for conflicts between moral standards and efficiency (Donaldson, Warehane, & Cording, 2002). We must say with Tiemstra (1990) that how we get work done (the means) matters a great deal to people since means are loaded with values. Put in other words, the economics of getting work done is intimately connected with “nonmaterial features of social life and of the environment.” (Tiemstra *et al.*, 1990, p. 48) The system of commerce built on productivity “needs taming and correction by a moral-cultural system independent of commerce. At critical points, it also requires taming and correction by the political system and the state.” (Novak, 1982, p. 121)

With an understanding of contemporary business use of the concept we turn now to consider the biblical and theological themes and concepts which form the lens of God’s will through which to see productivity. Overcoming the various constraints on productivity requires, in some cases, several qualities all of which are valued in the Bible: Insight, understanding, diligent effort, wisdom, practical thinking and action.

BIBLICAL THEMES AND CONCEPTS

The traditional bodies of theological literature generally do not allocate much if any space to business concepts such as efficiency. Yet several biblical themes and concepts seem to be directly or indirectly related to the question of productivity. Biblical themes and concepts are relevant for the central question of this paper for at least three reasons. First, biblical themes form the context of moral thinking in the Bible. Second, biblical themes such as covenant, shalom and blessing allow for economic dimension within the context of a relationship with God. While these themes do not explore the specific details or methods to achieve productivity, they provide an important grounding for our expectations. Third, all the relevant biblical themes support an expectation of high productivity to be enjoyed in the covenant community.

The biblical record relevant to the question of productivity can be organized into two sets of themes and concepts. One set of biblical themes points to broad, general expectations of life under fully-productive covenantal prosperity. The other set of concepts are the instrumental means to achieve productivity while living in covenantal community. We will explore general expectations first. See Table 3.

[Insert **Table 3**. here.]

General Expectations of Covenant Promises

A general expectation of life in the covenant community is that the full potential of life will be realized as a gift of God. The general expectations are best summarized by a few theological themes such as: the attributes and character of God, Creation, covenant, shalom, blessing, and fruitfulness. We will explore each in turn.

The Attributes and Character of God. What is God's nature *vis a vis* business-related functions such as management? Systematic theologians have for years written extensively on the attributes and character of God. Some of the central salvation history acts of God that demonstrate his attributes and character are described in the Bible using business terms (Acts 20:28; 1 Corinthians 6:20; 7:23; 2 Peter 2:1; Revelation 5:9). God is the owner of the cattle (wealth-building assets) on a thousand hills as well as all animals of the forest (Psalm 50:10). Israel is described as God's inheritance (Deuteronomy 4:20; 7:6) and God's possession (Exodus 19:5; Deuteronomy 14:2; 26:17-19; 1 Samuel 12:19-22; 2 Samuel 7:18-24; Jeremiah 11:3-5; 24:7; 31:31-34; Ezekiel 34:20-24; Zechariah 8:8; see also Titus 2:14). God is the source and giver of Wisdom (1 Kings 3:28; 4:29-34; 5:12; 10:24; 2 Chronicles 9:23; Proverbs 2:6; James 1:5; 3:17) and insight including practical wisdom required for managing wealth-producing assets. The Holy Spirit inspires the abilities of the craftsmen who build the Tabernacle (Exodus 28:3; 31:6; 36:1-2). God is an omnipotent, omniscient planner and faithful leader.

The Bible sometimes describes God's work in terms of productive human occupations and technology. God is a gardener and farmer (Genesis 2:8; Matthew 9:37-38; 13:30; Mark 4:29; Luke 3:17; Revelation 14:14-20). He cares for the entire earth as his field of endeavor (Psalm 104:13; 2 Samuel 7:10). He works like a vineyard owner and an olive grove owner (John 15:1-2; Romans 11:24). He does the wealth-building and caring work of a Shepherd (Genesis 48:15; 49:24; Psalm 23; 100:3; Matthew 9:36; 10:6; John 10:1-27; 1 Peter 5:2-3; Revelation 7:17). He is a potter (Jeremiah 18:6-7), a refiner of gold and silver and a worker of other metals (Malachi 3:2-3; Ezekiel 22:20), someone who uses measures to establish the weight and amount (Job 25:20-28; Isaiah 40:12), and a craftsman and builder (1 Chronicles 17:10; 2 Samuel 7:11; Psalm 127:1; Hebrews 3:4; 11:10). His work that is most highly valued by sinful humans who want to be reconciled to Him, the Bible describes in terms of economics (1 Corinthians 6:20; 7:23; 2 Peter 2:1).

The Bible depicts God as intentional and acts out of love when pursuing his plans for this earth. If we apply the principle of imitating God in our economic affairs including efforts to achieve productivity, we must conclude that the drive for economic security through efficiency must be firmly grounded in and energized by love for God and love for other persons.

God is interested in business technology. Those who engage in business are to consider their business technology as belonging to God not merely because He is the owner of all things earthly (1 Chronicles 29:11; Psalm 50:10; 104:24; Proverbs 16:11; Haggai 2:8), but also because the business transactions in the market that involve the use of His assets for the good of his creatures must be carried out in a way that honors him and watches out for the interests of his community (Leviticus 19:35-36; Deuteronomy 25:13-15; Proverbs 11:1; 20:10, 23; Ezekiel 45:10-12; Hosea 12:7; Amos 8:5-6; Micah 6:11). Thus, any work that humans do with technology to advance their economic welfare is a work for and with God. As humans devise inventions which are useful for promoting justice, they are also advancing God's work on earth. By the same token, it is an abomination to do wrong to others under the charade of using technology designed to promote fairness.

Creation. The Creation account describes God's interest in the material dimension of life (see 1 Timothy 4:4). "God did not have to create us with a need for material things or a need for

the services of other people...but in his wisdom he chose to do so.” (Grudem, 2003, p. 27) He is the Creator of all material (Davidson, 2008). We should correctly assume that in all our work, either directly or indirectly, we work with that which has come from the hands of the Creator himself. By extension such work deserves the degree of reverence due to the Creator. Productivity is achieved with what God owns. Ultimately, our efficiency depends on diligent work with his assets.

One of the first lessons we learn from Creation theology is that human life begins with an encounter with God. (Doukhan, 1993, p. 208) Humans are utterly dependent upon God for their existence and sustenance. They are also dependent upon the soil for sustenance. Regardless of whatever humans do on the earth in terms of productive work, these fundamental relationships cannot be forgotten. (Hiebert, 2001, p. 13) Because humans are dependent on their environment to survive and since this is a dependence structured at Creation, we must ask ourselves to what degree or in what ways do humans have responsibility to manage this dependence? Is this to be an active or passive dependence? Does dependence mean that humans should simply be gatherers of what the earth produces on its own, or does it suggest that humans will do all in their human power to encourage the earth to increase what it produces?

God is an efficient worker first preparing the planet for life and community and then creating community that can be sustained by the earth (Genesis 1; Fretheim, 2005). The Bible describes God as being a skillful and clever worker both in Creation and in Redemption (Psalm 136:5; 139:15; 1 Corinthians 3:7-9, 19; Jensen, 2006; Perdue, 1994; Scott, 1960). While God creates *ex nihilo*, something not possible for humans, humans are co-creators with God (Larive, 2004, p. 73; Stevens, 2006). At the creation of the earth, the very next steps of the process was to make the planet begin flourishing (Genesis 1:1-10). Yet, he asked humans to participate with him to bring forth the potentiality that the good earth offered (Novak, 1982, p. 39).

A few other observations can be made from the Creation and Fall in terms of economic activities. Barry Gordon (1989) suggests that God created humans with the ability “to cope with the burden of opportunity cost” which involves foregoing the benefits of outcomes from discarded choices. As beings holding responsibility for dominion over the earth, humans will desire to promote similar results from their work. God made us with “a desire to be productive, to make or do something useful for other people. Therefore human desires to increase the production of goods and services are not in themselves greedy or materialistic or evil. Rather, such desires to be more productive represent God-given desires to accomplish and achieve and solve problems.” (Grudem, 2003, p. 28) The earth naturally produces green beans, tomatoes, potatoes, corn, soy beans, apples, cherries, peaches, blackberries, and strawberries. But nature produces in more abundance when it produces through the efforts of human beings working side-by-side with it to subdue the fields and orchards. The implication of this is that human beings are unusual among creature in the ability to increase the capacity of the earth to sustain human life.

After the Fall, the ground was cursed (Genesis 3:17). Gordon describes the result of this as humans being in a “self-elected contest with scarcity.” (Gordon, 1989, p. 4) But the earth still supported population growth (Genesis 4:1-2). Through division of labor, a fundamental human innovation, the post-Edenic family with God’s help were able to provide for themselves. As predicted by God because of sin it is difficult to engage in efficient work (Genesis 3:17-19; 5:29; Deuteronomy 26:7; Ecclesiastes 1:13-14; 2:17, 23; 5:17; 10:15; Isaiah 40:28-31; 46:1; Matthew 11:28). It is another “good” element of creation that God made humans with “purposive rationality” (Packer, 1990, p. 20) which can be applied to solving the problem of difficult work which needs to be accomplished for the glory of God and the good of humans. “It is only

through work that people can tap the richness creation has to offer, and it is through organizations that this work is carried out most effectively.” (Calvez & Naughton, 2002, p. 10)

As an architect of useful, productive time for work God designed human economy to be built around the concept of Sabbath (Genesis 2:1-3; Exodus 20:8-11; 23:10-12; Leviticus 23:3). At the end of Creation week God blessed the Sabbath (Genesis 2:3). Here God’s benediction is to a recurring period of time set aside for the purpose of fostering the covenant relationship with His creatures (Adeney, 1988b, p. 307). In purely economic efficiency terms, the seventh day is equal to 14.286% unused capacity if no work is accomplished during these twenty-four hours. Instead, it is “used” (if one can speak of the Sabbath in terms of utility value) to respond to God and nourish the relationship with him. According to Christian economist Henry Rempel from an economic perspective Sabbath “means that there is more to life than greater efficiency in the production of material goods and services.” (Rempel, 2003, p. 61)

There may be a practical interdependence between six days of productive labor and the Sabbath rest. Without the Sabbath-rest type of relationship with God the six days of productive labor would be nothing more than meaningless toil without rest for body, mind and spirit. We might even say that Sabbath is necessary for productive work. Without Sabbath humans would be doomed to an existence of ceaseless labor with very little to offer in terms of ultimate meaning. Taking one day in seven rests the body and mind. It allows for the rejuvenation of the human spirit. Under very difficult working conditions Sabbath is vital to preserving emotional health and wellbeing. But, perhaps the opposite also is true. Without productive labor Sabbath rest it might be difficult to experience the full potential of Sabbath rest.

In the first Great Commission God asked humans to work in caring for the productive capacity of the earth (Genesis 1:26-28). He pronounced that we are to be fruitful and multiply as a species. In practical terms multiplying can be sustained only through productive use of the natural resources for growing food and making available clean water. He also stated that they should have dominion over and subdue the earth. This dominion is both a privilege and a responsibility (Packer, 1990). Grudem (2003) states that the Hebrew word translated as “subdue” “implies that Adam and Eve should make the resources of the earth useful for their own benefit...” (p. 25-26) Other scholars emphasize the strength of the verb referring to royal control and domination. However, as God’s viceroys on earth men and women are to care for the earth in the same spirit of stewardship, attention to detail and responsibility that God himself cares for the planet and its inhabitants. In Genesis 2:15 the Hebrew suggests that humans are working in service to the earth. In this lies an important tension. The Commission to rule the earth bringing nature under human control by human effort is coupled in Genesis with the Commission to serve the earth by caring for it, its productive capacity and its needs and also serve by protecting the earth from harm that humans are at risk of doing as they rule the earth (Genesis 2:5, 15-16; 3:23; Geisler, 1989, p. 305; Hiebert, 2001, p. 14-15).

Perhaps the blending of rulership and serviceship involves taking care as we assist the earth’s natural processes that are at work so that the earth can reveal its productive potential. If this is a valid way of understanding the Genesis account, humans and earth together work as a unified whole to enhance the earth’s goodness and thereby bring glory to the Creator. Put in other terms, humans can worship God by helping the earth realize its God-intended potential but not to such an extreme that the welfare of the earth is harmed (Butkus, 2001, p. 19-20). Is it stretching the biblical principle too far to claim that when humans work with nature to reveal its true productive potential, though in ways that protect the earth and its needs, this enhances what

we have come to call “general revelation” of God (Romans 1:20)? This paper suggests that such a conceptual linkage is biblical.

It may be relatively easy to see how ruling and serving combine in the work of farming. The farmer temporarily scars the top soil by turning it over allowing oxygen, water and other nutrients to penetrate the upper layer of soil so that the seeds can bear more fruit. The natural processes heal the scar and increase yield. But can the human who works in a copper mine view his work in the same biblical frame of reference? Can the owners of an iron ore mine, a coal mine, an iron refining plant, a bauxite factory, and an oil refinery similarly view the work of their organizations from this biblical record? When an oil well is drilled, pump installed and maintained in an efficient manner so that it fills the pipeline to the oil refinery, does this work also fit under the category of ruling and serving? How about the work of the oil refinery that transforms the crude oil into a variety of petrochemical fuels which are then used to increase efficiency in working with other resources of the earth: Can the work of these types of organizations that produce component parts for or materials used in the farmer’s equipment also be scripturally framed through this Genesis account?

Another relevant tension is present in the Creation account. Humans were given dominion over nature (Genesis 1:28; 2:19-20; 9:2; Psalm 8:6-8), but at the same time are relatively insignificant creatures in the context of the immense Universe. “...these two views are often used in the same context (see especially Ps 8 and Gen 1 and 2), so as to convey the idea that both should be assumed together. In fact this tension is vital since it preserves man from two often experienced pitfalls, namely idolatry and ecological abuse.” (Doukhan, 1993, p. 197)

Another dimension of Creation theology important in this paper is that God not only created but also remained present for sustaining life (Nehemiah 9:6; Psalm 36:6; 104:14, 27-28; 136:25; 145:9, 15-16; 147:9; Matthew 6:26; Luke 12:24; Colossians 1:16-17). Sustaining life assumes that those involved achieve at least a minimal level of productivity. But is God a minimalist encouraging just barely enough productivity to meet the needs of today? The biblical record suggests not. Rather, God is interested in a level of productivity that results in flourishing abundance.

Covenant. One of the central themes of scripture is that of covenant (*berith*) (Hafemann & House, 2007; Dumbrell, 1984; Brueggemann, 2002; Dyrness, 1977; Hasel, 1972; LaRondelle, 2005; Robertson, 1980). It is the Creator who is also the giver of covenant (Grant, 2003). The significance of covenant in this context is that the principles of covenantal living demonstrated by God are to be imitated (LaRondelle, 2005; Pava, 2001; McCann, 1997; Herman, 1997; Allen, 1984). Relevant to the topic of this paper is that covenant contains an economic dimension.

The promise of land, one of the chief wealth-building assets available in Bible times, became closely associated with the fulfillment of God’s Covenant (Genesis 12:7; 15:7, 18; 17:8; 35:12). Likewise the promise of a great nation comprised of a multitude of people implies the ability of the nation to produce a sustainable amount of food and other resources obtained from managing flocks and herds (Genesis 26:12). Apparently faithfulness to God coupled with practical wisdom is how covenantal faithfulness as a whole can be advanced so that covenant promises are realized (See for example Genesis 13:6-17; 36:7; Ecclesiastes 5:11).

Standing in tension with growth-oriented covenant promises is an anti-growth structural provision in covenantal society: The concept of sabbatical and Jubilee (Gordon, 1989, p. 17). Also, in the context of business relationships the Bible presents the value of justice and fairness which is the foundation of covenantal relationships with both employees and customers. Promoting a relationship with customers by being marginally more efficient than competitors

(and thereby offering lower prices) must not be achieved at the expense of the covenantal relationship with employees (Jeremiah 17:11). Likewise, a business owner must not let employees' personal interests interfere with maintaining a covenantal relationship with customers (Proverbs 23:4-5; 27:23-27). This tension is not fully resolved in the Bible but seems to be present under the banner of a broader, fundamental principle of living in the fear of God.

Shalom. It is difficult to find one word which encompasses the full range of meaning of the Hebrew word *shalom*. Perhaps well-being in every dimension of life comes the closest. Shalom is rooted in the concepts of righteousness, steadfast love and faithfulness to the covenant (Psalm 85:9-13; Isaiah 60:17; 66:12; Jeremiah 29:4-14; Brueggemann, 2001; Stendebach, 2006). It embraces spiritual, social, international political, physical, emotional, and economic dimensions (1 Chronicles 22:9; 2 Chronicles 15:5; Job 5:23-24; Psalm 85:8-13; 119:165; 122:6-9; Proverbs 16:7; Jeremiah 33:6).

One of the poetic passages of Scripture records Solomon's prayer for peace for his son, expected to be the next king. (Psalm 72) In this passage we see that shalom comes from God in the forms of righteousness, help to the poor, freedom from oppression, rain for crops that bring abundant harvests, international harmony and political power, economic power, and world-wide worship to God.

In Zechariah 8:16 "the people are called upon to practice *mispat shalom*. The intended purpose of law is shalom. This means not simply making peace between contending parties, but promoting the prosperity of the people. In v. 19 the people are exhorted to 'love truth' (*met*) and shalom. In parallel with *met shalom* most likely means a social environment that can be described as 'peace and beneficial effects of all sorts.'" (Stendebach, 2006, p. 39)

The biblical concept of shalom includes an economic dimension (Psalm 122:6). Implied in this dimension is an assumption that humans who wish to participate in the blessings of shalom will do so not only at the Tabernacle during worship but also in the context of marketplaces where they must conduct business in order to achieve prosperity. Wealth is the fruit of faithfulness to covenantal law, wise human effort and God's gift (Joshua 1:8; Psalm 1:1-3); however, it seems reasonable that such prosperity is realized only if one is efficient in his work.

Biblical discussions of shalom are broad in scope and do not attempt to explain all the operational details of economic life such as the best ways to achieve productivity. Nevertheless the promise of economic prosperity, an integral element of shalom, is not contradictory to the practical effects of efficient work in the fields, the grinding mills, and among the flocks and herds. One might argue that while shalom is the covenantal gift of God to those who are faithful to him, such a gift is mediated in part through the wise efforts of workers who approach their tasks as faithful stewards.

Blessing. Integral to the concepts of covenant and shalom is the idea of receiving and giving blessings (*berakah*). The first place we see blessing being given is in Genesis where God speaks the word and the whole earth is filled with blessings of abundant food and resources for all creatures (Genesis 1: Psalm 128:3-4; Brueggemann, 2002, p. 20; Dumbrell, 1984, p. 68). Adam and Eve were blessed when God promised that they would be fruitful and multiply (Genesis 1:28). At the end of Creation week God blessed the Sabbath (Genesis 2:3). Here God's benediction is to a recurring period of time set aside for the purpose of fostering the covenant relationship with His creatures (Adeney, 1988b, p. 307).

The idea of giving a blessing is that one person transmits "power for life to another party." (Brueggemann, 2002, p. 18-19) Blessing is essentially a prayer that God will bless the other person in every way envisioned by shalom (see Numbers 6:24-26; Psalm 29:11; McBride,

2006; Magdalene, 2000). “The most characteristic dimension of the power for life that is transmitted in blessing concerns prosperity, wealth, health, and fertility...Blessing is thus an intentional, deliberate act that proposes to enhance the receiver’s life in its material dimension.” (Breuggemann, 2002, p. 18-19; See also Adeney, 1988a, p. 306; McBride, 2006) When you bless, you call for the results of productivity to be realized in another person’s life. You are expressing hope that God’s gifts, mediated through the blending of human and divine effort, will come to reality for another. Blessing requires you to move out of your own selfish concerns and enter the concerns of another wishing that he or she will be prosperous.

Fruitfulness. Another underlying theme in Scripture is that of fruitfulness (*parah*) and barrenness (*aqar*). Fruitfulness, God’s original plan for the earth and for society, is contrasted with barrenness and waste which comes as a result of sin. So powerful is this contrast, that the fruitfulness of the land and the wasted land ideas were used as metaphors for how God will bless or destroy (Genesis 1:22, 28; 8:17; 9:1, 7; 17:6, 20; 26:22; 28:3; 35:11; 41:52; 47:27; 48:4; Exodus 1:7; 23:30; Leviticus 26:9; Psalm 105:24; 107:33-40; Isaiah 5:5-6; 24:1-3; 45:18). The fertility or sterility of the land is second in value only to fertility of the womb. Fruitfulness of the land is regarded as bringing satisfaction (or disappointment) to people when God blesses with fruitfulness or curses with barrenness (Deuteronomy 7:13; Psalm 107:24-43; Mackie, 1988, p. 248) Barrenness as a wife was considered not only a disappointment but also a mark of reproach and humiliation (See Genesis 18:12; 30:1; 1 Samuel 1:10).

At Creation it is God’s powerful word that overcomes the chaos of a desolate world without form and void so that it can be a productive place for his creatures. From the Creation account (Genesis 1:26-28) forward all Scripture writers show positive regard for fruitfulness and a disdain for barrenness. Fruitfulness in material things (e.g., bearing children, growing the population of the nation, fertility of the earth for growing crops, expanding herds and flocks, and enjoying the results of one’s labor) is inseparable from fruitfulness in spirituality. God’s promise to Abraham that he would be the father of and a blessing to a great multitude included the promise of protection and prosperity (Waltke, 2007b, p. 320). When the covenant relationship with God is broken, people treat each other unjustly and the fruitfulness of creation is harmed. But when the covenantal relationship is restored, the fruitfulness of the environment is also redeemed (Miller, 1979, p. 15-16).

A by-product of this, one might argue, is operational efficiency. Israel was instructed to prune fruit-bearing plants as a means to prepare for the sabbatical year. Pruning results in higher production (Leviticus 25:3-4; John 15:1-2). When searching out the land of Canaan the Israelite spies were instructed to evaluate the productivity of the land (Numbers 13:19-20. See also Joshua 5:12). The implication is that higher production is better than lower production. Careful breeding of sheep will result in a wealthier flock (Genesis 30-31; 30:43; Proverbs 27:23-24).

Some activities are impractical for results desired in the present and because of this are valued less than other, more practical activities. For example, planning on how to develop agricultural assets compared with developing property with buildings should take into account the long lead time to harvest and the seasons. Also, it is unwise to use technology that is inefficient or useless. Using technology must be done in a wise manner so that the full purpose of the technology can be achieved (Proverbs 1:17; 24:27; Ecclesiastes 10:9-10).

Waste goes against God’s design; productivity supports His plan. This is not just because productivity is efficient and God prizes efficiency. Rather, productivity is a sign of reverence to God who gave all the wealth-building assets of the Earth. When humans work with God as joint

tenants of the land and its resources, we will do all we can to minimize waste and in so doing respect God who is the true Owner.

In contrast to the concept of fruitfulness, waste, unproductive resources and desolation (*shamem*) are spoken of in strong disapproving tones in the Bible (E.g., Deuteronomy 29:23; 2 Kings 2:19; 2 Chronicles 36:21; Nehemiah 2:17; Job 12:24; 15:28; 38:27; Psalm 107:34-40; Proverbs 26:7; Isaiah 1:7; 3:14-25; 5:6-9; 13:9; 17:9; 24:1; 33:8; 42:15; Ezekiel 15:3-5; Hosea 12:9; Luke 13:6-7; 14:35; Hebrews 6:8). One interesting example of this is when Hosea 12:9 warns the people that because of their unfaithfulness they should expect to live in tents again, a warning that the people would regress in their standard of living. Such a warning would be relatively meaningless unless the people had come to value living in more permanent, comfortable dwellings.

When a resource became unproductive it was expected that the owner of the resource would correct the problem or simply get rid of the unproductive resource replacing it with something else that produces. The principle of destroying unproductive assets and replacing them with productive assets may be the rationale behind Solomon's wisdom that there is a time to plant and a time to uproot that which is planted, i.e., when the asset cannot be salvaged because it is irreversibly unproductive (Ecclesiastes 3:2. See also Matthew 3:10; Luke 3:9; 13:6-7; Hebrews 6:7-8).

Instrumental Values and Virtues Relevant to Productivity

We move from the broad, general expectations of productivity as covenantal promises of God are realized to the instrumental means by which productivity is achieved. Another way of looking at this is that some of the instrumental means represent values or virtues that are prized among members of the covenant community. The virtues and values explored here include: truth, wisdom, prudence, usefulness, and stewardship.

Truth. The manager's work with respect to truth (*emeth*) is not limited merely to pursuit of the truthfulness of information or through this gaining knowledge about reality. It involves this, but it has a much deeper, more profound meaning. The biblical concept of truth is a concept of action (Berkovitz, 1969). When the king, emulating God's character, builds his throne on truth, he builds it on actions of faithfulness to covenant relations. In essence advancing truth means advancing the cause of faithfulness to commitments in and around the covenant community.

Truth means ensuring that actions have lasting validity. It also means being a reliable messenger of information about reality. Workers who seek to shape their productivity with truth will avoid achieving short-term gains in productivity at the expense of long-run flourishing. Said in the reverse, achieving short-term gains in efficiency at the cost of long-run success is a form of being counterproductive.

Only by getting to the truth about reality of an organization's performance and revealing this to the key stakeholders can decision makers make informed decisions. Without this, relevant corrective actions in production cannot be taken with confidence. Taking corrective actions based on the truth of a situation ensures that these actions of faithfulness will advance the overall purpose of the organization. This understanding of truth is directly related to the concept of shalom. It is reliability, stability and faithfulness in daily actions that accompany complete wellbeing and prosperity envisioned in covenantal relations of salvation history. Efforts to improve productivity should be rooted in these dimensions of truth.

Wisdom. The fundamental ideas from the Hebrew concept of wisdom (*chokmah*) mean firm and well grounded first of all in the fear of God and second in the business of living life (Dyrness, 1977, p. 189, 195; von Rad, 1962, p. 418; Müller, 1980). Wisdom cannot be understood apart from its relationship to covenant (Grant, 2003; Hubbard, 1966; Waltke, 2008; See also Eakin, 1977). It means being intensely prudent but also ever mindful of one's relationship with God (Breuggemann, 2002, p. 234). As applied to practical life wisdom means "generally, 'masterful understanding,' 'skill,' 'expertise.'" (Waltke, 2007a, p. 913; see also Fox, 1968; Collins, 2009) If a person has wisdom, he or she is able to cope with life and achieve "what would otherwise be impossible." (Waltke, 2007a, p. 913) Indeed one of the fundamental ideas associated with wisdom is the ability to consider something diligently or closely and thereby have insight and understanding (Ringgren, 1977). This seems especially applicable to the question of productivity. Taking an inefficient work process and making it productive requires the kind of wisdom that encompasses not only technical knowledge but also systems thinking, a knowledge of human nature and commitment to moral principles.

Like thinking, contemplation, emotions, discernment, and the center of ethical activity, the seat of wisdom is in the heart (Proverbs 2:10; 6:14, 18; 10:13; 12:25; 14:10, 30-33; 15:14-15; 23:17; 24:12). This means that the essence of practical wisdom which operates in the larger context of God's will is more a matter of character than merely intellect or practical knowledge. It is the "life of worship extended to the home and marketplace. Wisdom is religion outside the church." (Dyrness, 1977, p. 189)

One risk is that unattended wisdom will be turned toward selfish means and ends. Shrewdness and craftiness are generally looked upon as being contrary to true wisdom which always finds its basis in the relationship with God. Thus, we are admonished to watch over our hearts with diligence (Proverbs 4:23).

In the Old Testament wisdom is applied to: Technical and artistic skills (Exodus 28:3; 31:6); the magic arts (Exodus 7:11; Isaiah 3:3); government (Ecclesiastes 4:13; Jeremiah 50:35); diplomacy (1 Kings 5:7); war (Isaiah 10:13); judging and ruling a nation (1 Kings 3:28; 4:29-34; Proverbs 20:26; Isaiah 11:1-6); cleverness to master people and situations (2 Samuel 14:20; Job 39:17); and the ability to answer difficult questions (1 Kings 10:2-4; Waltke, 2007b). It is a short step of logic to assume that the concept of wisdom encompasses actions designed for improved efficient production.

Prudence. Closely related to idea of wisdom is the concept of prudence (*ormah*). Prudence has been called the "pilot virtue" of the moral life since it concerns making decisions with one's conscience as the guide (Kaiser, 1966, p. 265). While prudence includes the idea of being pragmatic, it is "not mere pragmatism, for even the most practical teaching is theologically based. The pragmatic approach seeks to come to terms with the nearly-hidden order of God that must be embraced and accepted as the only viable context in which an effective, joyous, and secure life can be lived." (Breuggemann, 2002, p. 232)

Prudence is not identical with craftiness (Kaiser, 1966, p. 266). Craftiness (*arum*) and shrewdness are sometimes associated with deception (Proverbs 12:16, 23; John 8:44; 2 Corinthians 11:3; Ephesians 4:14; 2 Timothy 2:14; Revelation 12:9). Satan is the most crafty of all created beings (Genesis 3:1, 13). Prudence sometimes is discussed as the antithesis of deception since it involves the search for knowledge and truth (Proverbs 14:8, 15, 18).

Prudence means careful discretion when applying knowledge to everyday life; however, prudence is not merely mental activity (Holloman, 2005). It is practical reason in action relative to the activities of life in an uncertain environment where contingencies must be considered.

(Aquinas, 1947) It is the ability to be shrewd and thereby keep oneself from being misled (Kooy, 1962). Prudence is closely related to having insight and discretion which leads to success in life (Opperwall, 1979, 1986; Niehr, 2001; Fretheim, 1997; Luc, 1997; Gordley, 2002).

Discretion (*sekel, mezimmah*) and cleverness (*bin*) can be used to serve evil purposes as well as good ones. “It is thus significant that Proverbs 1:3 incorporates reference to ‘faithfulness, judgment, and uprightness’ and that Proverbs 1:7 adds that reverence for Yhwh is the beginning or first principle of wisdom; the hearers are not to follow the example of the people of intrigue (who ignore the first) or the serpent (who ignored the second). Faithfulness, judgment and uprightness are, after all, the characteristics of Yhwh’s own person, and they are, thus, the qualities or stances that Yhwh looks for in people.” (Goldingay, 2006, vol. 2, p. 583)

Applying these ideas to the questions related to productivity it seems clear that decisions to improve productivity can be made in a crafty, scheming way to take advantage of either customers or employees who must bear the burden of work. But, such decisions can also be made in support of faithfulness and righteousness. The New Testament sometimes combines the two ideas of being sensible and faithful perhaps to highlight that practical wisdom must be infused with spiritual faithfulness to God (Matthew 24:25; Luke 12:42). Exactly how this is achieved in the varied contexts of business is not a topic that the Bible explores in depth; however, we seem to find in Scripture that the virtue of prudence is especially applicable to those in charge of organizations who have the stewardship responsibility to make decisions which affect multiple groups of stakeholders (Kaiser, 1966, p. 265).

Usefulness. The Scripture assumes that humans will attempt to be as productive as possible. Usefulness (*sakan, tsaleach*), the biblical concept that is most directly related to the concept of efficiency, is prized in Scripture (Matthew 5:13-16; 2 Timothy 2:21; 4:11). Disciples are expected to be useful for the expansion of the Kingdom of God. Humans are expected to be useful and when they are not they are considered to be destructive (Proverbs 18:9; Titus 3:14). Humans do not go to all the work of planting seeds and tending the crops without expecting that they will get something good in return (Deuteronomy 20:6; Proverbs 27:18; 1 Corinthians 9:7). When they know that harvest season has come, they will persist in attempting to gather the produce that by right belongs to them (Matthew 21:33-41; Mark 12:1-9; Luke 20:9-15). Unless circumstances outside the control of the diligent worker come up, the worker should lack nothing and such persons will be able to help others (Psalm 128:1-2; 1 Thessalonians 2:9; 4:11-12; 2 Thessalonians 3:11-12; Titus 3:14; Romans 12:11; Hebrews 6:10-12; Ephesians 4:28).

Specific biblical instruction regarding care for wealth-building asset of sheep appears in Proverbs 27:23-27. Here the writer commands the sheep owner to know well the faces of his flocks. Paying attention to assets is not merely a rational mental activity but also the activity of the “inner man”—the heart of the shepherd. Verse 23 teaches the owner of an asset to take care of it since it is an important source of income. Verse 24 explains why: financial success can be lost. The next three verses describe how well-tended flocks will renew themselves providing a continual source of new income. When the shepherd tends the flocks, the potential for value continues (Goldingay, 2006).

Other implicit encouragement to be efficient is found in Ecclesiastes. Here Solomon explains the tradeoff that comes from not using a sharp axe. Either sharpen the axe or become stronger (Ecclesiastes 10:10). The implication is that it is foolish to toil with a dull axe (See Ecclesiastes 10:15). Indeed Israelite people who lacked the technology for this were willing to pay money to the Philistine blacksmiths to have their agricultural instruments sharpened (1 Samuel 13:20-21). Sharpness is used in biblical record to suggest power and assurance that what

is anticipated will be accomplished in an efficient manner (2 Samuel 12:31; 1 Chronicles 20:3; Psalm 45:5; 52:2; 57:4; Isaiah 5:28; 41:15; Jeremiah 51:11; Ezekiel 21:10-16; Amos 1:3; Revelation 14:14-18).

Matthews (1988) argues that grain production involved the use of plows drawn by a team of oxen (p. 51). Oxen were used in threshing the harvested grain in a communal threshing floor. Later in Israel's history more efficient threshing sledges came to be used (2 Samuel 24:16-24; See also Matthews, 1988, p. 54). Efficiency in winnowing the grain also was important. Threshing floors were situated in areas near the village where the wind could carry away the chaff (Psalm 1:14).

Another passage suggests the importance of establishing the proper sequence of work tasks in order to have the most desirable outcome (Isaiah 28:23-29). Here the farmer understands that there is a right time for each activity. In the farmer's case he learns directly from God the proper instructions. Workers in other occupations do not have this same benefit but instead must learn from experience and perception making adjustments according to the various circumstances in which they are working (Von Rad, 1972, p. 140).

Measuring devices were used in Bible times to provide information regarding the relative efficiency of accomplishing tasks with precision and for allocating resources according to a plan or standard (E.g., Exodus 16:16-18; Ruth 3:15; 1 Samuel 25:18; 2 Samuel 8:2; Jeremiah 13:25; Ezekiel 40-42).

The usefulness of static efficiency is no doubt in view when:

- Moses gives instruction regarding community responsibilities to care for private property (Exodus 20:15; 23:4; 24:14; Leviticus 19:11-13; Deuteronomy 22:1-4)
- God's instructions regarding the collecting of manna (Exodus 16:11-36)
- Solomon gives advice to the slothful hunter who lets his prey get away (Proverbs 12:27)
- Solomon gives counsel to consume only what we need (Proverbs 21:20; 25:16)
- The prodigal son wastes his inheritance (Luke 15:14)
- Jesus asked the disciples to gather the leftovers after feeding the people (John 6:12)
- Followers of Christ are admonished not to waste time (Galatians 6:10; Ephesians 5:16).

The benefit of dynamic efficiency seems to be in view when the psalmist prays for full granaries and tens of thousands of sheep to be born among the flocks on the hills (Psalm 144:13-15). Productivity is not merely an individual matter but rather a community concern. Entering into work with one's strength and diligence is preferred over weakness and slothfulness (Ecclesiastes 9:10; 1 Chronicles 29:2; Mark 12:30-33; Romans 12:11; 1 Corinthians 9:24-26; Ephesians 5:16; Colossians 3:24). An important reason for this is that work itself is a means by which we can love and glorify God (Mark 12:30-33; Larive, 2004, p. 142-146; Jensen, 2006, p. 67-96; Volf, 1991, p. 136-141). Pulling, lifting, carrying, and placing a load with one's strength is sure to get more accomplished than weak-hearted attempts at work. Better yet is using suitable technology which makes the tasks easier. In promoting the work of the Gospel followers of Christ are counseled to make the most of every opportunity (Colossians 4:5).

In 2 Timothy 3 Paul discusses the importance of the Bible. In verse 16 he describes the spiritual value of the sacred Scriptures but in terms of four dimensions of utility:

All Scripture is inspired by God and profitable (*ophelimos* = *useful, beneficial, advantageous*) for teaching, for reproof, for correction, for training in righteousness;

Likewise when the New Testament discusses godliness and good deeds, it does so in terms of utility (1 Timothy 4:8; James 2:14; Titus 3:8). This is not to diminish the importance of the spiritual value of the Bible, godliness, and good deeds as ends in themselves. Apparently the Bible values the practical, instrumental role that these play in our lives.

People in Bible times understood the impact of useful technology on costs and dynamic efficiency. Hundreds of different types of technology are referred to in the Bible. Setting a bird snare in the presence of a bird was considered foolish since such a snare would be useless (Proverbs 1:17). When Solomon was building his house the stones used were cut with saws “according to measure.” These were the costly stones (1 Kings 7:9-11). Solomon hired Hiram, a bronze worker from Tyre, to make fancy decorative art. One of the notable features of Hiram’s work was his use of one mold and form for the ten basin stands that he made (1 Kings 7:37). This suggests the understanding of how a single mold used repeatedly can improve efficiency as well as reducing variation in the art work.

People were sometimes described in terms of their practical usefulness to others. Paul describes the servant Onesimus to Philemon in terms of his usefulness (Philemon 1:11). He describes Mark as being useful (2 Timothy 4:11). Paul describes sinful humans as being useless before God (Romans 3:12). In Jesus’ parable he employs strong language of contempt for the slave who is useless to his master (Matthew 25:30).

In tension with the idea of diligence to increase usefulness we also find in scripture the concept of contentment. In work we can find contentment. Three dimensions of contentment are found in the Bible. First, as much as diligence is held in high regard in the Bible, economically unproductive time and activity is allowed and even encouraged (Exodus 20:8-11; 23:10-12; Leviticus 23:3-5; 23:4-44; Deuteronomy 5:12; 15:7-11; 2 Chronicles 36:20-21; Mark 6:31; Smith & Wheeler, 1999). Ecclesiastes says that one handful of rest is better than two handfuls of work (Ecclesiastes 4:5-6). Second, in work itself we can find pleasure and contentment (Ecclesiastes 2:24-26; 3:4, 10-15; 5:18-20; 7:14). Third, while diligence produces quantitative economic gain, contentment with that which is produced also produces a qualitative gain from work (Ecclesiastes 2:24-26; 3:4, 10-15; 5:18-20; 7:14).

The Apostle Paul wrote from prison to the church of Philippi and said: “I have learned in whatever state I am to be content. I know how to be abased and I know how to abound, I have learned the secret of facing plenty and hunger, abundance and want. I can do all things in him who strengthens me.” (Philippians 4:10-13) Here abundance is implicitly valued.

The principle of maximizing the usefulness of assets was used in the Bible to illustrate important spiritual truths (Deuteronomy 32:2; Psalm 1:3; 92:12-14; Isaiah 55:10-11; Matthew 3:10; 7:18-19; Luke 3:9; 13:6-9; 14:34-35; John 15:1-2; Hebrews 6:7-8; Jude 1:12). This suggests that for the Bible writers the fundamental principle of maximizing utility was viewed as a good thing. Individuals who have faith in God will be like trees firmly rooted near permanent sources of water: they will flourish (See Patterson, 2009).

The Old Testament commonly uses the word *good* (*tob, tub, yatab*) with a utilitarian meaning (Höver-Johag, 1986). For example, good means being functionally well-suited for a particular situation or making sure that things are in proper order to accomplish a goal. Good counsel leads to accomplishing a task (2 Samuel 17:14). It is used to express excellence in skill or action (1 Samuel 16:17; Psalm 33:3; Isaiah 23:16; Jeremiah 1:12; Ezekiel 33:32). Being

shrewd in planning is considered good (Jeremiah 2:33; cf. Micah 7:3); however, excellence in behavior can be used to foster evil purposes (Micah 7:3). In agriculture fertile land and animals produce good for farmers (Genesis 41:5, 22, 24, 26; 1 Samuel 8:16). God gives the good rain from his rich treasury of blessings that results in watering the thirsty earth which then becomes a blessing to the farmer and his community. Doing good for or to someone meant, among other things, doing something that resulted in material prosperity, security and harmony (Genesis 26:29; Ezra 9:12; Isaiah 52:7; Jeremiah 8:15). One thing must be remembered: regardless of what humans do that is good, God is the source of *tob* and *shalom* (Jeremiah 15:11; 17:6; 33:11; 44:17). Here it seems clear that humans participate in sharing God's gift by what they do for each other.

At the same time as encouraging utility, the Bible condemns achieving utility by immoral actions. Stealing, which in some instances is the most efficient way to obtain goods, is condemned. Stealing Naboth's vineyard was wrong as is all forms of improving one's prosperity at the expense of others (Exodus 20:15; Leviticus 19:11; Deuteronomy 5:19; 1 Kings 21; Matthew 19:18; Mark 10:19; Luke 18:20; Romans 13:9; Ephesians 4:28).

Stewardship. It is at Creation that the concept of stewardship is first introduced. While God is the ultimate owner of all things material in the Universe, he has entrusted to humans the responsibility for care for and manage the earth (Genesis 1-2; Oxford, 1990). Stewardship is not merely conservation and prevention from loss (static efficiency), but also active production as a way to serve God by contributing toward the sustenance needs of creatures. This does not mean that human stewardship replaces God's work of sustenance but rather that humans work together with God (Brown, 2001). Stewardship "requires efficiency and productivity. It is commendable to do a better job of managing the created order. That glorifies God, reveals the wonder of God in creation, and services other people more effectively." (Chewning, Eby & Roels, 1990, p. 173) This sentiment is echoed by Boersema (2005): "Christians should not make an idol of efficiency and productivity. Other Biblical goals—employment, the environment, etc.—are likely to be more important when trade-offs need to be made. A false dichotomy should, however, be avoided—efficiency versus Biblical goals. Stewardship also includes efficiency." (p. 11) This theological interpretation of the concept of stewardship is also presented in Sproul (2008) who states that because God owns the earth, humans are required to work hard and efficiently to fulfill our role. "Productivity is more than an abstract word used by demanding executives and scientists. It goes beyond pragmatic growth programs and material welfare. Productivity is a spiritual ethical obligation. We are called to be productive by God. God commands that we 'bear fruit,' that our work be worthwhile." (p. 47)

The household steward (*asher*, *epitropos*) and the royal steward were important positions in the ancient Near Eastern community (Layton, 1990). Perhaps the most notable example of the successful household steward is that of Joseph (Genesis 37-49). The story of Joseph depicts a faithful steward to emulate who was able to increase the wealth of the household by his wise management (Genesis 39:1-6, 22-23; 49:22). His moral steadfastness coupled with his ability to increase wealth made him attractive to the Egyptians. Stewards who served kings helped the king govern either during times of crisis or geographic regions. They also assisted in diplomacy and may have managed the royal estates or the royal household who lived at the palace. Household stewards were expected to be trustworthy and sensible efficiently allocating household resources to their charges (Luke 12:42; 1 Corinthians 4:2). In the New Testament Jesus tells a parable about a rich man who had trusted the management of his affairs to an unfaithful steward who

wasted his master's money but was shrewd in his dealings with the household creditors (Luke 16).

Agricultural Yield an Example

Agricultural yield is closely related to the concept of fruitfulness and barrenness. It bears directly on the question of this paper. Agriculture was the dominant industry in Bible times. Further, the Bible mentions various types of agricultural work more than any other. The Bible considers agricultural yield in terms of efficiency.

Grain farmers were aware of the desirability of and the factors that increase agricultural yield (Hebrew: *nathan*; Genesis 26:12; Matthew 13:8, 23; Mark 4:8, 20; 2 Corinthians 9:6). One assumption that seems implicit in these biblical discussions is that higher yield is more highly valued than lower yield. Agrarian workers sowed seed with the hope (and worry?) that the harvest (yield) would exceed the amount sown (see Psalm 126:6). This was a community concern. Productive agricultural work had an impact on the entire community.

In Jesus' parable of the sower he used crop yields of 30-fold, 60-fold and 100-fold in illustration (Matthew 13:3-8; Mark 4:2-9; Luke 8:5-8). McIver (1994) reviews that scholars have been divided whether these figures represent miraculous results or typical results. McIver is of the opinion that they are miraculous results and that typical yields are in the range of 4-fold to 6-fold in the region though in modern times the highest yield generated with the most scientific farming methods was 32-fold. If McIver is correct, the point of Jesus' parable must certainly be that when the seed falls into good soil nothing short of a joyous miracle occurs because of God's creative power at work. The fact that Jesus refers to crop yields in this manner suggests that his hearers understood the value of higher yields. They must have marveled at the story.

Successful agricultural yield results from the blending of human effort, divine power and the gifts of God on this earth. The farmer must prepare the field, plant, nurture, prune (Leviticus 25:3; Isaiah 5:1-7; 18:5; John 15:2), protect with the use of walls, hedges, watch towers and watchmen (Psalm 80:12-13; Song of Solomon 2:15; Isaiah 1:8; 5:2-5; Jeremiah 4:17; Matthew 21:33; Mark 12:1), use animals to help with the work (Proverbs 14:4), and then harvest the fruit (Conrad, 1993). It is the work of God, rain, water from streams and rivers, the sun, and the good earth, all of which are gifts of God, which produces the increase in yield which the farmer uses to sustain his family and to sell to others who need food (Deuteronomy 33:14; Psalm 67:6; Isaiah 30:23; 55:10-11; Jeremiah 17:8; Ezekiel 17:5; Hebrews 6:7). Of particular interest here was the need to prune trees and vines. Pruning allowed for "new growth and the removal of nonproductive or old vines." (Matthews, 1988, p. 57)

The concept of an increase in yield from agricultural work is used in the Bible as a metaphor for spiritual growth and perseverance (Matthew 13:8, 23; Mark 4:1-20; Luke 8:8, 15), dependence on God (John 15: 1-8; 1 Corinthians 3:6; 2 Corinthians 9:10), the power of the Gospel (Isaiah 9:2-3; Hosea 10:12; Colossians 1-6), bringing glory to God (Romans 7:4), and doing good works for others (Colossians 1:10). God's work in giving the former and the later rain becomes a metaphor for the outpouring of the Holy Spirit on God's people to prepare them for the future harvest (Joel 2:23-29). Abundant crop yield generally is a sign of God's blessing and human intelligence (Genesis 26:12; 30:30). The prophet Amos foretells a time when God's people would enjoy extraordinary agricultural production (Amos 9:13; Volf, 1991, p. 165).

The people feared several types of threats to agricultural yield. They feared harvesting crops that appear to be productive but in reality are worthless (Hosea 8:7). Sowing but not being able to reap because of invading armies is grievous (Leviticus 26:16; Deuteronomy 28:33, 50-55;

Isaiah 1:7; Jeremiah 5:17; 8:16). More than this, it is a sign that God's blessing is no longer enjoyed – a curse of even greater magnitude than the loss of food. Allowing the land to be overtaken by weeds destroys its ability to produce crops (Hebrews 6:7-8). Drought destroys the life-giving power of the land and ultimately human life. Clouds bring life-giving rain but storm clouds can bring hail that destroys. Crops can be stricken with blight or mildew. Also, pests such as locusts and caterpillars can devour the harvest before it is taken in (Exodus 9-10; Deuteronomy 28:22; 1 Kings 8:37; 2 Chronicles 6:28; Jeremiah 14:12; Amos 4:9; 7:1; Haggai 2:17).

At least four measures of efficiency are mentioned explicitly or implicitly in the Bible. All of them appear to support the idea that measuring efficiency is to be expected of wise and sensible stewards. Some are mentioned in the context of parables whose intent was to teach important spiritual principles of God's kingdom. Sometimes the mention of yield explicitly refers to material results of agrarian activities. Other times the concepts are used metaphorically to refer to spiritual dynamics. (Leviticus 25:11; 2 Kings 19:29; Ecclesiastes 11:4; Isaiah 37:30; Hosea 8:7; 10:12; Micah 6:15)

One measure used in agriculture appears to be based on a ratio of seeds sown to seeds harvested (Matthew 13:8; Luke 8:8; Deuteronomy 1:11). Another measure appears to be based on the amount of acreage required to produce a certain amount of harvested food (Leviticus 26:16; Isaiah 5:10). A third measure implied in the Bible is what might be called the labor-to-yield ratio, i.e., how many paid workers the sowing, caring and harvest require to gather in a certain yield (Matthew 9:37-38; 20:1-16; Luke 10:2). A fourth measure is the idea of comparing the value of what one owns before diligent work with the value after work—the idea of gain or profit (Proverbs 3:13-14; 15:27; Ecclesiastes 3:9; Jeremiah 6:13; 12:13). It might be noted here that the idea of achieving gain is not criticized per se, but rather achieving gain unjustly or dishonestly (E.g., Jeremiah 8:10; 22:17). See Table 4.

[Insert **Table 4.** here.]

Under the Old Testament economy every seven years the land was allowed to return to its natural abilities without human effort applied to production. Because of this those engaged in agricultural businesses could not earn a profit from the land during the sabbatical year. By observing the sabbatical year the people were acknowledging God's ownership while they also showed their trust in his sustenance (Kiuchi, 2007).

Imitatio dei

As alluded to above one significance of the theological themes is that of imitating God (*Imitatio dei*). This theme runs throughout Scripture (Leviticus 11:45; 19:2; 20:7; Deuteronomy 10:12, 18-19; 11:22; 26:17; Matthew 5:48; 8:22; Mark 10:21; Luke 6:36; John 13:15; Ephesians 4:23-24; 5:1; Philippians 2:2-11; 3:10; 1 Peter 1:15-16; 4:13-16; Hebrews 12:2; 1 John 3:16-18; 4:11; deSilva, 2001, p. 41-51; Waltke, 2008). Volf (1991), Larive (2004), and Jensen (2006) employ the concept of *imitatio dei* implicitly or explicitly throughout their writing on the theology of work. LaRondelle (2005) applies the concept to covenantal relations.

Imitating God involves working in ways that are designed to improve the ability of people and the earth to flourish. One can argue that imitating God involves being as productive

as possible. In other words, imitation is not limited to private spiritual experience but can be applied to all dimensions of human experience, all moral actions in a social context. It also applies to the world of productive work: “When we work to produce (for example) pairs of shoes from the earth’s resources, God sees us imitating his attributes of wisdom, knowledge, skill, strength, creativity, appreciation of beauty, sovereignty, planning for the future, and the use of language to communicate.” (Grudem, 2003, p. 27) Imitation also involves resting on the Sabbath (Exodus 20:8-11). Such imitation extends to our relationships with each other (1 John 4:11) and even with strangers (Deuteronomy 10:18-19) and enemies (Exodus 23:4).

Responsibility Toward Unproductive Persons

Productivity in the Bible is related to the theme of Redemption. The Scriptures recognize that not everyone is productive in society. For example, those who can work but do not are expected to start working since productivity is a community issue not an individual matter alone (Exodus 20:8-11; 23:11; Ruth 2; Proverbs 6:6; 10:26; 13:4; 18:9; Ephesians 4:28; 1 Thessalonians 3:11-12). Those who are intentionally unproductive must depend on the goodwill of others in the community. When the community encourages the indolent to work, they are acting redemptively not only for the lazy person but also for the good of the community. Likewise when the community helps a willing person to find employment, the community acts redemptively.

Also, those who are unable to work because of illness depend on the community to assist them in getting well if this is possible. Jesus healed many people who were unproductive drains on society. True, the healings may have had as their primary focus the expansion of the Kingdom of God, but the economic dimension to the healings should not be overlooked (as is frequently done by Bible scholars). For example, at Capernaum alone Jesus healed many people (Matthew 8:16; Mark 1:29-34; Luke 4:23, 40; see also Matthew 4:24; Luke 5:15). If we include the economic dimension as one of the results of the healings, the redemptive nature of the healing is much broader than spiritual and physical transformations that were taking place.

Another way redemption is experienced is when those in a community gladly give their productivity in place of those who cannot work because of age, infirmity, illness or condition. This is redemption through substitution by which the community, in essence, says to the unproductive member of society, “We are here for you. We substitute our labor for yours.” Contributing to the needs of the poor is a related responsibility that is designed to bring blessing to the giver as much as to the receiver (Proverbs 22:9; Romans 12:13; 2 Corinthians 9:12-15; 1 Timothy 6:18; Sider, 2005).

The aged are vital members of the community even if they are unable to work as productively as younger people. Their productivity is of a different kind: offering wisdom and counsel to others and advocating on behalf of those who are employed.

SUMMARY & CONCLUSIONS

A theological understanding of the firm and its operational processes must first of all and by definition be about God. The question is whether our theological understanding of God and his plan for relationships on earth provides an authentic model to imitate in the world of business efficiency. As stated in the question studied in this paper, when looking through the lens of Scripture, what do we find with respect to the managerial drive to achieve efficiency in work processes?

When evaluating modern concept of operational efficiency through the lens of Scripture, we can note the following:

1. The Bible offers few direct encouragements to strive for efficiency; however, there are numerous concepts and themes throughout the Bible that indirectly support the concept. In addition, the Bible does not warn against or forbid a managerial emphasis on efficient work.
2. Striving for efficiency appears to be in full agreement with the Bible and should be encouraged. It can be seen as a measure of the degree to which an organization and its community is flourishing.
3. Striving for efficiency in a manner that breaches other covenant principles is contradicted by the Bible and should be avoided.

Suggesting that Scripture provides theological support for working as efficiently as possible by no means places efficiency on a pinnacle of perfection. But, theological support offers a rich set of ideas all of which must be a part of our understanding.

Implications for a Theology of Efficiency

The following tentative implications are drawn as potential building blocks for a theology of efficiency based on the above analysis:

- God's **attributes and character** are not inherently contradictory to productivity. His nature fosters abundance and flourishing. God is the owner of all things material in the Universe. God is the omnipotent and omniscient Ruler who cares for his creation with attention to detail, faithfulness, and love. He values abundance and prosperity of head, hand and heart. Whatever humans do to achieve productive output, the drive for economic security must be firmly grounded in and energized by love for God and love for others.
- Humans were **created** for productive work. Through both ruling and serving the earth humans and earth work together as a unified whole to enhance the earth's goodness and thereby bring glory to the Creator. Productivity in work is not an end in itself but a means of serving the sustenance needs of others. What fosters community and interdependence is good. What cares for the earth's sustained ability to be productive is good. What undermines these is bad. Exercising dominion over nature must constantly be held in tension with the exercise of humility and service to nature. If it were not for what God has done and continually does on the earth, human efforts for productivity would be futile. Ultimately, it is God who provides the on-going context for efficiency to be established. All business technology belongs to God. This includes technology of machines and work processes but also management technology. This means that whatever technology is used to enhance efficiency is technology in which God has an interest. It also means that such technology should be treated with reverence, setting it apart for a holy purpose. In other words, business technology is to be infused with the essence of the covenantal, Sabbath-relationship with our Creator. Because of sin it is more difficult to achieve efficiency. As an architect of useful, productive time for work God designed human economy to be built around the concept of Sabbath.
- Efficiency in labor is a **covenant** community issue not just an individual issue. All work is performed ultimately for the benefit of the larger community and before God. Resources that are used in labor are ultimately community resources and must be guarded (static efficiency). This includes the persons who perform the work in society, i.e., as

human persons they must be cared for as well as the needs of the organization. Business relationships are communal by nature. What one business does results in an impact on others in the community: employees, customers, and suppliers. Unless businesses watch out for the interests of others, the whole community can be at risk of loss. Efficient production is one valid means of looking out for the interests of the larger community.

- The covenant blessings of **shalom** are gifts from God but mediated through taking responsibility for human effort. Part of this responsibility is watching out for the use of resources and working toward productive output. Humans are expected to be a **blessing** to others. There are many ways to be a blessing. Productivity is one way.
- From the Creation account forward all Scripture writers show positive regard for **fruitfulness** and a disdain for barrenness and desolation. Fruitfulness in material things (e.g., bearing children, growing the population of the nation, fertility of the earth for growing crops, expanding herds and flocks, and enjoying the results of one's labor) is inseparable from fruitfulness in spirituality.
- In essence advancing **truth** means advancing the cause of faithfulness to commitments both to individuals and to the organization and even to the marketplace. It means ensuring that actions have lasting validity.
- **Wisdom** means being intensely prudent in life but also ever mindful of one's relationship with God in all of life. **Prudence** includes the idea of being theologically-based and pragmatic. Those who have insight and understanding regarding how to go about the business of life are valuable members of the community. They contribute to the well-being of all. Efficiency is one of those aspects of the human experience that has an important instrumental and indispensable role of being prudent. This does not mean that the drive toward efficiency is of necessity one of the highest human virtues, that it should take on the qualities of a religious faith, or that it is by nature an entire worldview.
- **Usefulness** is encouraged in Scripture. Owners of wealth-building assets must be intentional about how they manage assets. When possible, they should use appropriate technology to make work more productive. Properly sequencing work tasks improves the likelihood of a favorable outcome. Using a measuring system provides important information to help allocate resources and to check results of work.
- **Stewardship** is not merely conservation and prevention from loss (static efficiency), but also active production as a way to serve God by contributing toward the sustenance needs of creatures. This does not mean that human stewardship replaces God's work of sustenance but rather that humans work together with God.
- Higher agricultural yield is more highly valued than lower yield. Successful agricultural yield results from the blending of human effort, divine power and the gifts of God on this earth.
- We have responsibility to encourage those who can work to find productive employment. Where persons are unable to find work the community can give them opportunities to work in exchange for assistance. And, where persons are unable to work because of illness or other health conditions the community has an obligation to provide assistance substituting their own productive labor for those who cannot work. Senior members of the community can continue to be productive by their own work and by providing wisdom from which other community members can benefit.
- Humans in their sphere are to **imitate** God. While, because of sin, this is impossible through the human will, strength and power, through the life-changing power of the Holy

Spirit humans may learn to enjoy their characters becoming transformed according to the likeness of their Savior. *Imitatio dei* is not limited to spiritual experiences but embraces all of life including the experiences of productive work in society. If God's concept of productivity includes both efficiency and Sabbath rest from productive labor, humans in their sphere will model these two principles: Be as efficient as possible while working and continually exercise restraint from working by being as committed to the relationship with God as humanly possible.

Can we say that efficiency is normatively good in its own right? Perhaps oddly, Yes and No. Productive labor, it would appear from biblical theology, is in direct fulfillment of God's first Great Commission. Walking along side the earth assisting it in being more productive can be seen as worship if carried forward in a way that respects the earth. However, efficiency, it would appear from Scripture, is good only as it serves the larger social purposes of the organization be it a for-profit, nonprofit or government as it serves the greater good of society. Pursuing efficiency as if it is a terminal value alone is to turn the purpose of the business into mere economic value. This contradicts other fundamental ideas about why businesses exist, namely, to serve the common good of society.

APPLICATION

When leaders evaluate the productivity of the organization they can ask of themselves and their managers:

- What has God done to give us the gift of efficiency?
- Have we fulfilled our obligations to the community at work as well as to the larger community while we have pushed for excellence in productivity?
- Have we acted faithfully to the commitments we have made while achieving efficiency?
- If productivity is less than desired, did we fulfill our stewardship responsibilities effectively?
- Are our productivity goals reasonable given how we want to treat our people?

FOR FURTHER RESEARCH

This exploration of the fundamental building blocks of a theology of efficiency has excluded some areas that deserve more research and thought. Several questions come to mind including the following:

- Is there evidence of economies of scale in the Bible? For example, in Luke 12:13-21 Jesus uses an illustration from economics counsel regarding building larger barns. Is Jesus criticizing economies of scale or merely greed?
- What is the nature of idolatry as it applies to business management decisions designed to promote efficiency? Some authors have discussed idolatry in the context of business and economics (For examples: Gorringer, 2010; Goodchild, 2009; Richards, 2002; Stapleford, 2002; Wheeler, 1995) but a comprehensive study focused on the topic needs yet to be completed.
- Certain passages of Scripture deserve more in-depth study include: Matthew 11:19; Mark 10:29-30; Luke 7:35; 19:13-15; John 6:12; 21:6; 1 Corinthians 7:29-31; Titus 2:2, 6.

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TABLES

Table 1. Dynamic and Static Efficiency

DYNAMIC EFFICIENCY	STATIC EFFICIENCY
Creating growth through transforming inputs into outputs; attempting to achieve gains in productivity	Conservation, avoiding waste, creating reliability and reducing variation; prevent loss

Table 2. Examples of Efficiency Measures

OPERATIONAL PERFORMANCE
Productivity = Output ÷ Input
Productivity = Units produced per unit of time (per hour, day, week, month, quarter, or year)
Productivity of Labor = Output ÷ Cost of Labor used to produce the Output
Productivity = Actual Output ÷ Expected Output
FINANCIAL PERFORMANCE
Short-Term Financial Performance of a work unit = Percent variance from expected performance
Financial Performance = Profitability, Return on Assets (ROA), Market Value

Table 3. Biblical Concepts Relevant to Productivity

General Expectations Relevant to Productivity	Instrumental Values and Virtues That Influence Productivity
Attributes and Character of God	Truth
Creation	Wisdom
Covenant	Prudence
Shalom	Usefulness
Blessing	Stewardship
Fruitfulness v. Barrenness and Desolation	

Table 4. Measures of Efficiency in the Bible

Measure	References
Seeds sown to seeds harvested	Matthew 13:8; Luke 8:8; Deuteronomy 1:11
The amount of acreage required to produce a certain amount of harvested food	Leviticus 26:16; Isaiah 5:10
Labor-to-yield ratio, i.e., how many paid workers the sowing, caring and harvest require to gather in a certain yield	Matthew 9:37-38; 20:1-16; Luke 10:2
Comparing the value of what one owns before diligent work with the value after work—the idea of gain or profit	Proverbs 3:13-14; 15:27; Ecclesiastes 3:9; Jeremiah 6:13; 12:13